In brief

Cholera genome sequenced: The complete *Vibrio cholerae* bacterium genome was announced in Washington, DC last week (*Nature* 2000;406:477-84). The genetic blueprint will help direct development of a new vaccine and potential medical cures for the disease.

Threat of doctors' strike in Ireland averted: The Republic of Ireland's 3000 junior doctors, who threatened strike action earlier this year, have voted to accept an £Ir60m (£46m) pay and conditions package.

Record compensation sums paid to patients: Compensation paid to patients in negligence claims against their doctors in the United Kingdom rose to £77m ($115.5m) last year, nearly double the amount paid four years ago. The Medical Defence Union blamed the increase on the rise in the number of claims and larger individual awards.

Public wants lottery money used for NHS: Three out of four people want the government to use more lottery money to fund the NHS, says a poll by the BMA. Two fifths of the 2000 adults surveyed by MORI supported a hypothecated health tax.

Government acts to reduce England's waiting lists: Troubleshooters from the Modernisation Agency, announced in the *NHS Plan* for England, will be sent to the seven hospitals in England where patients wait more than three months to see a consultant.

Anti-wrinkle creams may accelerate ageing: The European Commission is considering restricting the use of α hydroxy acids in anti-wrinkle creams. Research from the US Food and Drug Administration found these chemicals could cause long term damage.

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Gene therapy can reduce tumours

Scott Gottlieb *New York*

A new trial involving patients with recurrent head and neck cancer found that those who received gene therapy plus chemotherapy had more tumour regression than those receiving chemotherapy alone. The gene therapy group also experienced no tumour progression within six months of therapy, the study found.

The study involved 30 patients with head and neck cancer, most of whom had already had surgery or radiation but who suffered a recurrence. Patients in whom this kind of cancer recurs are considered to be incurable. In the study, researchers used a virus known as Onyx-015 to deliver therapeutic genes to sites of recurrent cancer. In 19 patients the tumours shrank by 50% or more, and in eight of these 19 patients the tumours disappeared altogether (*Nature Medicine* 2000;8:879-85). A phase 3 trial is now under way.

"We treated patients at seven different centres, and we all saw some pretty striking results," said the study's lead author, Dr Fadlo Khuri of the University of Texas M D Anderson Cancer Center in Houston. Dr Khuri said that he was "cautiously optimistic" about the treatment but said a larger trial was necessary. "Many things look wonderful in phase 2 but not in phase 3," he said.

The trial has confirmed that Onyx-015 may be an optimal vector for delivering genes to sites of tumours as it seems to have been able to grow and replicate in cancer cells but apparently not in the ordinary cells. Many features of the virus's behaviour, however, are still not understood. In phase 1 tests, Onyx-015 given alone had lasting effects in only 15% of patients with head and neck cancer. The reason may be that the cancers are solid tumours, infiltrated by normal cells, and in many cases injections of the virus may not have reached all parts of the tumours.

The phase 1 tests showed that the virus was much more effective when given in combination with chemotherapy. In the phase 2 trial, patients received chemotherapy to the whole body and the tumours were injected directly with the virus. In most cases, when patients died during the study, it was because they had tumours that could not be injected.

Onyx-015 is essentially an adenovirus—one of the causes of the common cold—that has a specific gene intentionally knocked out. In a normal adenovirus this gene swings into action as soon as the virus has entered a cell and makes a product that inactivates a vital cell component called the p53 protein. The role of p53 is to prevent a cell from dividing if its DNA is damaged or if the cell is under viral attack. In many types of cancer cells, the p53 gene is damaged by mutation.

Although Onyx-015 could not grow in normal cells, because it could not inactivate their p53 protein, it could grow in cancer cells that had already disabled their own p53 gene. In other words the defective virus could discriminate between normal and cancerous cells, killing only the latter. □

Folic acid researchers honoured

Roger Dobson *Abergavenny*

Almost a decade after it was found that folic acid could prevent the development of neural tube defects such as spina bifida, three researchers have received the Kennedy Foundation international award for scientific achievement for the discovery.

The award was made to Professor Nicholas Wald of Barts Hospital, Professor Richard Smithells, emeritus professor of paediatrics at Leeds University, and Dr Andrew Czeizel of the Budapest National Institute of Hygiene for key studies that led to the eventual identification of the beneficial effects of folic acid.

The award came four years after the United States acted on the research and began to fortify flour with folic acid. The UK Department of Health last month launched a three month consultation before deciding whether to require manufacturers to add folic acid to flour in the same way.

Professor Nicholas Wald, who discovered the folic acid link

For Professor Wald, however, the evidence for fortification has been overwhelming for some time. "There is now conclusive evidence that if women consume more folic acid there is a substantial reduction in the chances of having a baby with spina bifida," he said. "Women need to take it before they become pregnant, so putting it in flour it is the most effective way of preventing this disorder in the population, and the Americans have been doing it since 1997."

Most affected pregnancies are now picked up through screening, he said, and the real impact in Britain will be the avoidance of the discovery of an affected pregnancy leading to a termination. He said he is not expecting there to be opposition to fortification in the UK: "Nearly all groups that have expressed views have been very positive about it. It is mainly government that has been rather slow to act.

"The previous government was very reluctant to even consider fortification. It was felt that the approach to health care should be people taking control of their own lives, rather than a nanny state. Yet almost all public health involves governments or setting standards. Fortunately I think the current government is in favour." □